(19) World Intellectual Property Organization

International Bureau



WO 2005/023741 A2

(43) International Publication Date 17 March 2005 (17.03.2005)

PCT

(10) International Publication Number

(51) International Patent Classification7:

C07C 39/00

(21) International Application Number:

PCT/IL2004/000810

(22) International Filing Date:

8 September 2004 (08.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 157849

10 September 2003 (10.09.2003)

- (74) Agents: LUZZATTO, Kfir et al.; P.O. Box 5352, 84152 Beer Sheva (IL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (30) Priority Data:
 157849 10 September 2003 (10.09.2003) IL
 157849 10 Septemb (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GII,

invention describes some novel (+)-cannabidiol (CBD) derivatives, and their selective activity in the peripheral and not in the central nervous system. Thus, it is an object of the invention to provide the use of (+)-CBD derivatives as analgesics, anti-inflammatory and anti-diarrheal agents.

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 17 March 2005 (17.03,2005)

PCT

(10) International Publication Number WO 2005/023741 A3

- (51) International Patent Classification?: C07C 39/23, 43/23, 59/54, 59/72, A61K 31/065, 31/192, A61P 25/00, 29/00, 1/00
- (21) International Application Number:

PCT/IL2004/000810

(22) International Filing Date:

8 September 2004 (08.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

157849

10 September 2003 (10.09.2003)

- (71) Applicants (for all designated States except US): YIS-SUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL]; High Tech Park, Edmond J Safra Campus, Givat Ram, P.O. Box 39135, 91390 Jerusalem (IL). ARIEL LTD. [IL/IL]; c/o College of Judea and Samaria, Kiryat hamada, 44837 Ariel (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MECHOULAM, Raphael [IL/IL]; 12 Tchemichovsky Street, 92581 Jerusalem (IL). FRIDE, Ester [NI/IL]; 6 Havatzelet Hasharon Street, P.O. Box 165, 44814 Elkana (IL).
- (74) Agents: LUZZATTO, Kfir et al.; P.O. Box 5352, 84152 Beer Sheva (IL).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BP, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PHARMACEUTICAL COMPOSITIONS CONTAINING (+) CANNABIDIOL AND DERIVATIVES THEREOF AND SOME SUCH NOVEL DERIVATIVES

(57) Abstract: Cannabinoid derivatives are known for their functions in the central as well as peripheral nervous system. The present invention describes some novel (+)-cannabidiol (CBD) derivatives, and their selective activity in the peripheral and not in the central nervous system. Thus, it is an object of the invention to provide the use of (+)-CBD derivatives as analgesics, anti-inflammatory and anti-diarrheal agents.

5/023741 A3 ||||||